

PATENT SPECIFICATION

931,344

DRAWINGS ATTACHED.

931,344



Date of Application and filing Complete Specification : Jan. 22, 1961.

No. 2541/61.

Application made in Germany (No. R19783/68bGm) on

Jan. 21, 1960.

Complete Specification Published : July 17, 1963.

© Crown Copyright 1963.

Index at Acceptance :—Class 20(3), P4(B : R).

International Classification :—E04f.

COMPLETE SPECIFICATION.

A Lifting Device for a Venetian Blind.

We, HUNTER DOUGLAS INTERNATIONAL CORPORATION, a Corporation organized and existing under the laws of the State of New York, of 660 Madison Avenue, New York 21, 5 State of New York, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement :—

The known lifting devices for Venetian blinds comprise a drum having a smooth surface, the drum being rotatable about its longitudinal axis. In these known embodiments the lift cord is wound around the drum. Since a Venetian blind needs at least two of such lifting devices their drums are fixedly connected in the usual manner by means of a common shaft. One of the shaft ends is mounted in a screw thread for slidable displacement of said shaft in its longitudinal direction.

A disadvantage of these known embodiments consists in that the ladder tape of the Venetian blind must be arranged on separate means which are mounted above the drum on which the windings of the lift cord are wound. Another disadvantage consists in that the assembly of the devices is comparatively difficult and expensive. According to the present invention these disadvantages are avoided.

Accordingly the present invention provides a lifting device for a Venetian blind including a drum mounted for rotation about its longitudinal axis, characterised in that the drum comprises a screw thread groove which serves simultaneously for receiving a lift cord and a bearing for the drum, said bearing comprising a helically wound wire.

By this means the drum will be longitudinally displaced on its shaft. A parti-

cular advantage of the device according to the invention consists in that the cord can be arranged so deeply in the groove that a ladder tape can be led over these windings.

45

According to a particularly preferred embodiment of the invention the bearing consists of a wire spiral secured in a base which is stationary relative to the drum. This considerably simplifies the manufacture of the device.

50

The invention will be further explained below with reference to the example shown in the accompanying drawings.

55

In these drawings :—

Fig. 1 shows a view in elevation of the device according to the invention with the lift cord wound around a drum ;

60

Fig. 2 shows a section according to the line II—II in Fig. 1 ; and

Fig. 3 shows the screw thread bearing in perspective.

65

As is apparent from Fig. 1 a cylinder or drum 1 is provided with a screw thread groove 2. This groove is so deep as to entirely receive the lift cord 3. The drum 1 is slidably mounted on a shaft 9 which for example may have a hexagonal cross section. The shaft 9 is passed through a corresponding opening 10 (Fig. 2) of the drum. Moreover, a bearing 4 consisting of a wire spiral is mounted in the screw thread groove. On the shaft 9 there are provided two adjusting rings 11, 12 which limit the movement of the drum in the longitudinal direction.

70

The bearing shown in Fig. 3 comprises the wire spiral bearing 4 secured with its free ends in a stationary base 5. This base may consist of synthetic material. The stationary base 5 is provided with a bearing 7 for a guide roller 8 for the lift cord. The distance between the wire spiral bearing 4 and the guide roller 8 is so selected that the lift cord

75

80

runs into its groove without a sharp bend in its longitudinal direction (Fig. 1).

The bearing 7 for the guide roller is provided with a lip 13. When the bearing 7 is mounted, the lip 13 engages the edge 14 of a recess of the head rail 15 of the Venetian blind.

After the assembling is completed this lip 13 is held in position by a U-shaped spring 16. The spring 16 is mounted in a recess 17 in the base 5, and its ends are held in inturned edges of the head rail of the Venetian blind. In tensioned condition the spring 16 presses against the recess 17.

Around the drum 1 there is led a ladder tape 6 of the Venetian blind. The particular advantage of the invention resides in the fact that the device can be slid in the longitudinal direction into the already closed endless ladder tape.

The lift cord may consist of any material, for example a synthetic material; it may also be manufactured as a wire cable.

WHAT WE CLAIM IS :—

1. A lifting device for a Venetian blind including a drum mounted for rotation about its longitudinal axis, characterized in that the drum comprises a screw thread groove which serves simultaneously for receiving a lift cord and a bearing for the roller said bearing comprising a helically wound wire.

2. A lifting device according to Claim 1, characterized in that the helically wound wire bearing consists of a wire spiral secured in a base which is stationary relative to the drum.

3. A lifting device according to Claim 1 or 2, characterized in that the screw thread groove in the drum has such a depth that the lift cord is entirely accommodated in said screw thread groove.

4. A lifting device according to any one of Claims 1—3, characterized in that the ladder tape of the Venetian blind is led over the drum.

5. A lifting device according to any one of the preceding claims, characterized in that the stationary base of the screw thread bearing comprises a bearing for a guide roller for the lift cord, in which said guide roller is so positioned that the cord runs into its groove without a sharp bend in its longitudinal direction.

6. A lifting device according to any one of the preceding claims, characterized in that the shaft of the drum is profiled and is mounted in a correspondingly shaped opening in the drum.

7. A lifting device according to Claim 6, characterized in that longitudinal movement of the drum is limited by adjusting rings.

8. A lifting device according to any one of the preceding claims, characterized in that the stationary base comprises a lip which is arranged to engage the edge of a recess of the head rail of the Venetian blind and wherein a spring holds the lip in the recess.

9. A lifting device according to Claim 8, characterized in that the spring is also arranged to be pressed partly into a recess of the stationary base.

10. A lifting device for a Venetian blind, substantially as hereinbefore described and illustrated with reference to the accompanying drawings.

For the Applicant,
ARNOLD TICKNER,
Chartered Patent Agent,
Alexander House,
239/241, Shaftesbury Avenue,
London, W.C.2.

931.344 COMPLETE SPECIFICATION

1 SHEET

This drawing is a reproduction of
the Original on a reduced scale.

FIG.1

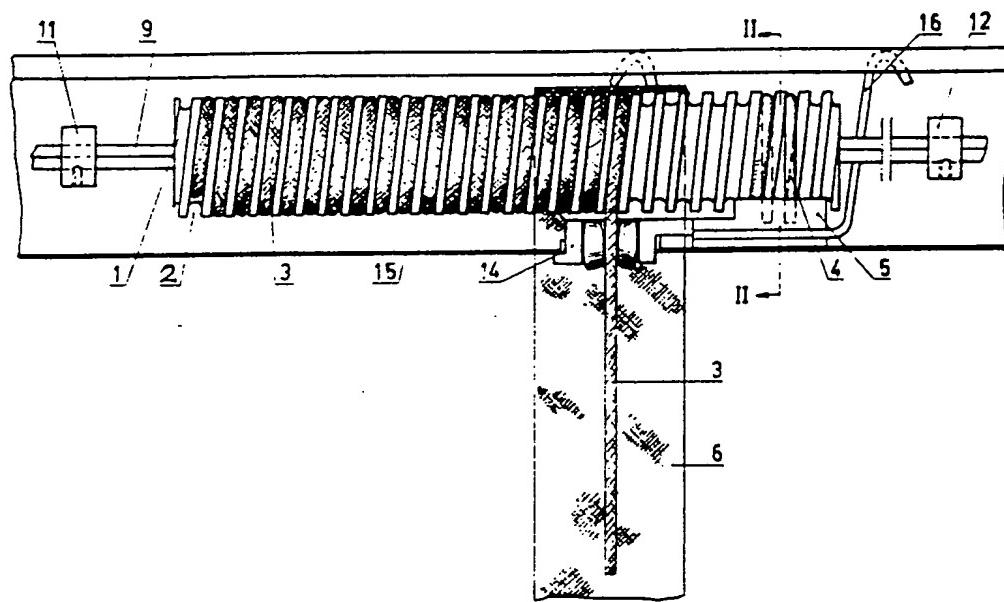


FIG.3

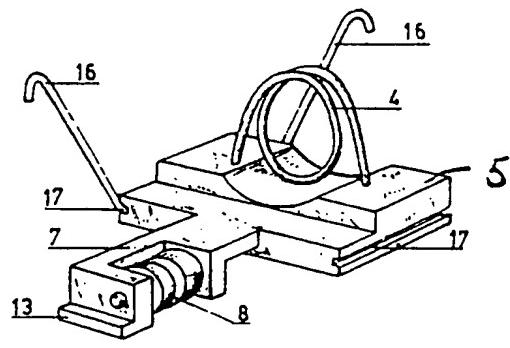


FIG.2

